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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,681	04/12/2006	Beverly A. Piatt	13891US	4007

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EXAMINER	
HOGAN, JAMES SEAN	
ART UNIT	**PAPER NUMBER**
3752	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,681	PIATT ET AL.	
	Examiner	Art Unit	
	JAMES S. HOGAN	3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 6-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *29,30* is/are allowed.

6)☒ Claim(s) *1-3,7-20,22-26 and 28* is/are rejected.

7)☒ Claim(s) *6,21 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed June 30, 2009 have been fully considered but they are not persuasive. As it may be depicted by Applicant as to the intended meaning of "one fluid entrance', the Examiner finds the Arguments non-conclusive as it applies to the applied art of Dvorsky et al. The 35 U.S.C. 112 rejection of claim 1 shall be removed; however the art of Dvorsky et al still applies in the broadest reasonable interpretation of the claims.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 7-12, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,302,331 to Dvorsky et al.

3. As per claim 1 and 28, Dvorsky et al discloses (see Figure 4) a spray head having at least one nozzle (120) configured to provide a charged aerosol from a liquid formulation, the nozzle comprising a manifold (190) having a fluid entrance (above each nozzle (120)) that delivers fluid in a equal cross-sectional flow that would equate the travel of the fluid in a equidistant manner to one or more discrete fluid spray sites (from nozzles 120), and a shroud (110) that at least partially surrounds the nozzles, each

nozzle creating a fluid passage configured that liquid traveling in the manifold travels an equal distance from the fluid entrance into the passage to any one of the fluid sites.

4. As per claim 2, the said fluid spray sites are arranged in a linear array,

5. As per claim 3, the spray head of Dvorsky et al further features a charged electrode (170) in communication with said fluid spray sites.

6. As per claim 4, the manifold features an equidistant passage (114) in fluid communication with the fluid spray sites.

7. As per claim 7, the pointed tips of the nozzles of Dvorsky et al qualify as spay shaping devices that would direct the electrodes to the spray.

8. As per claim 8, Dvorsky et al discloses the polarity of the electrodes and sprayer nozzles being referenced to one another, maintaining that they would be the same for spraying purposes (Col. 12, line 47-52).

9. As per claim 9, of Dvorsky et al discloses spray shaping mechanisms being parallel counter electrodes (Col. 12, line 66-Col. 13, line 8)

10. As per claim 10, the “counter electrodes” are shown in Figure 4 to be thin rods arranged in parallel and appear to “straddle” the spray sites, due their proximity to the nozzle tips.

11. As per claim 11 and 12, Dvorsky et al discloses moving electrodes in relation to the nozzles in order to create variations in spray shape (Col. 11, lines 36-54) and results in less material being used.

12. As per claims 18-20, the shroud (110) is configured to direct charged aerosol (See Figure 4) and extends beyond the nozzles and shows evidence it would shield

charged aerosol from environmental influences as well as preventing aerosol fro affecting areas around a targeted spray area.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,302,331 to Dvorsky et al.

15. As per claims 13-17, Dvorsky et al is silent as to the material of the shroud being a dielectric, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the shroud a dielectric, as common sense would dictate that a material having insulatory properties, given the nature of electrostatic spraying and further, the material possibly a polymeric, being transparent, opaque or pigmented is deemed to be obvious, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. See *in re Leshin*, 125 USPQ 416,

16. Claims 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,302,331 to Dvorsky et al in view of U.S. Patent No. 4,962,885 to Coffee.

17. As per claim 21, Dvorsky et al is silent as to the addition of tines on the end of the shroud. Coffee teaches tines (15) at the outlet of a shroud (12) of an electrostatic

sprayer. Although not necessarily used for engaging vegetation, the tines of Coffee would prove to be obvious to one having ordinary skill in the art at the time the invention was made as a plausible addition to the invention of Dvorsky et al for any and all intended use.

18. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,302,331 to Dvorsky et al in view of U.S. Patent No. 5,064,123 to Aiello et al.

The rejection of claim 1 above serves as the basis for the following. As per claims 23-25, Dvorsky et al fails to teach a device to transport the sprayer, specifically a wheel, nor a pivoting head. Aiello et al teaches (See Figure 1) a mobile electrostatic sprayer featuring at least one wheel (22, 24, and 26), thus controlling the distance from the nozzle to any sprayable target. Aiello et al teaches a pray head (112) configured (via flexible barrel (110) to rotate about one or more axes. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the spray head of Dvorsky et al with the wheels and pivoting head of Aiello et al, since it has been held that making an old device portable or movable without producing any new and expected results involves only routine skill in the art. See In re Lindberg, 93 USPQ 23 (CCPA 1952).

19. Claims 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,302,331 to Dvorsky et al in view of U.S. Patent No. 5,064,123 to Aiello et al.

20. As per claim 26, Dvorsky et al teaches a spray head having at least one nozzle (120) configured to provide a charged aerosol from a liquid formulation, the nozzle comprising a manifold (190) having at least. one fluid entrance (above each nozzle (120)) and one or more discrete fluid spray sites (from nozzles 120), and a shroud (110) that at least partially surrounds the nozzles, each nozzle creating a fluid passage configured that liquid traveling in the manifold travels an equal distance from the fluid entrance into the passage to any one of the fluid sites. Dvorsky et al does not specifically teach controls, a power source or a pumping mechanism. Aiello et al teaches a control panel (114), a power source (implied, via power cord (99), a pumping mechanism ((84), via ((86) and (85)), and a fluid container (42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the spray head of Dvorsky et al with the controls, pumping mechanism, and power source of Aiello et al, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. See *in re Venner*, 120 USPQ 192

Allowable Subject Matter

21. Claims 6, 21 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

22. Claims 29 and 30 are allowed.

Conclusion

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES S. HOGAN whose telephone number is (571)272-4902. The examiner can normally be reached on Mon-Fri, 6:00a-3:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. H./
Examiner, Art Unit 3752

/Len Tran/
Supervisory Patent Examiner, Art Unit 3752